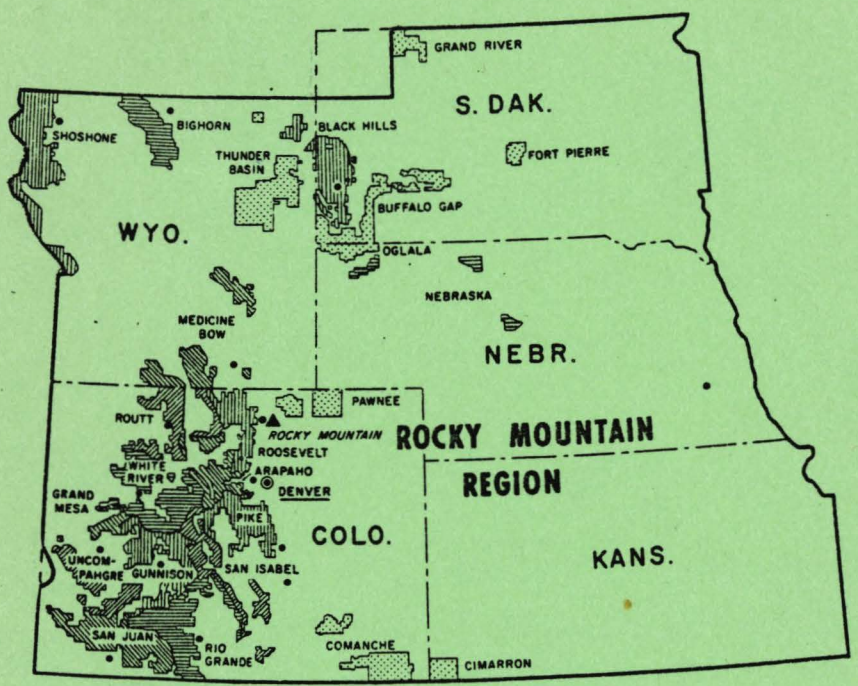
SB761
U7R6
R2-75-5

Library
xc to Hawkesworth

5230
May 1975

BIOLOGICAL EVALUATION

Dwarf Mistletoe
Gunnison National Forest
Cebolla Ranger District



U. S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE
State & Private Forestry
Region 2
Denver, Colorado

LIBRARY
JUN 15 1976
ROCKY MOUNTAIN STATION

BIOLOGICAL EVALUATION

Dwarf Mistletoe
Gunnison National Forest
Cebolla Ranger District

Prepared by: DONALD H. BROWN
Plant Pathologist

Approved by:

GEORGE L. DOWNING
Staff Director
Forest Pest Management

SIDNEY H. HANKS
Deputy Regional Forester
State and Private Forestry

BIOLOGICAL EVALUATION

DWARF MISTLETOE
Gunnison National Forest
Cebolla Ranger District
February 1975

A twenty-six year old stand of lodgepole pine in Stridiron Creek was surveyed in September 1974 for the incidence and distribution of dwarf mistletoe (see attached map). The stand is part of a much larger Management Unit where dwarf mistletoe control has been practiced for several years (see biological data sheet). The twenty acre stand was surveyed using the variable size plots, third nearest tree technique at 4-chain sampling intervals evenly spaced through the stand.[1] The survey was conducted jointly by District and Forest Pest Management personnel. The purpose of the survey was to provide information for the land manager to evaluate the feasibility of a precommercial thinning.

The field data was used to obtain yield projections by utilizing the computerized LPMIST programs (Myers, et. al., 1972).[2] A comparison of the various management alternatives with no stand entry, as shown in the first table, (see attached tables) demonstrates that acceptable yields can be obtained. As indicated in the yield tables, the greatest volume production occurs under the most intensive level of management that reduces the impact of dwarf mistletoe and in turn, stimulates growth. Even with minimum management, as shown under the 50 year cutting cycle, the yields would justify one precommercial thinning. The initial cut for each alternative is the same and involves a partial removal of the dominant and codominant crown classes. However, in order to obtain the project yields, the actual thinning must be done in the same way. The Land Manager then has the choice of several management alternatives to select from in bringing the stand through to rotation.

The stand is recommended as a pathologically sound sanitation thinning project.

1/ A survey procedure for evaluating Dwarf Mistletoe in proposed thinning projects. USDA Forest Service, Region 2, memeograph report, May 1972.

2/ Clifford A. Myers, Frank G. Hawksworth, and James L. Stewart. Simulating yields of managed, dwarf mistletoe-infested lodgepole pine stands. USDA Forest Service, Res. Pap. RM-72, 15p., 1971.

EVALUATION OF LODGEPOLE PINE DWARF MISTLETOE IN TIMBER MANAGEMENT UNITS

BIOLOGICAL DATA

General Description

Forest Gunnison

District Cebolla

Area Stridiron Creek

Acres 20 Site Index 60

Type and extent of:

Infected boundary approx. 25% of boundary

Natural barriers stream bottom, road

Estimated cost/acre $40 FY --

Stand structure description evenaged

Management plans: reference and date of last plan Gunnison TM Plan

Types of products post, poles, and saw timber

No. of intermediate cuts one precommercial one commercial

Year of final cut 2075

Date of last stand examination or survey September 1974

Proposed Suppression Method

I. Overstory Removal

Acres _____ Infected residuals/acre and distribution _____

Age of oldest regeneration _____ Date of oldest sale _____

II. Sanitation Thinning

Acres 20 Est. trees/acre before 1610 after 584 thinning

Stand age 26 Percent trees infected 56 Type of thinning: Precommercial X Commercial _____

Impact survey: Date 9/74

Results (see attached data & project map)

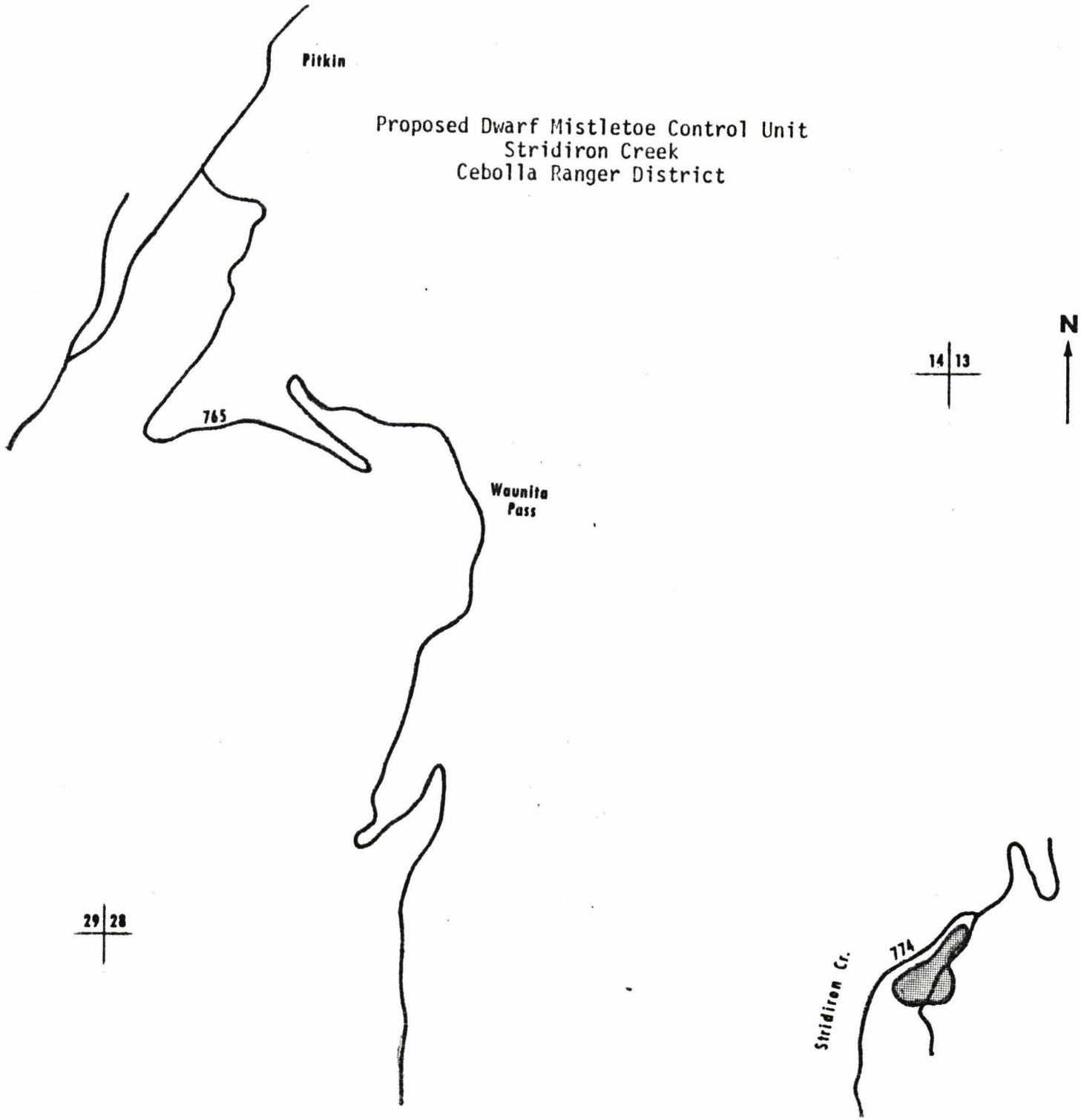
Related information and remarks The stand is part of a much larger Management unit with a history of dwarf mistletoe control work, primarily overstory removal.

Percent trees with terminal damage -- Other damaging diseases or organisms --

Terminal weevil injury has been seen on trees in the stand. Also, western gall rust infections were seen on several trees. Data were not collected for either of these problems during the stand survey.

Date 3/75

Examiner DON BROWN



Proposed Dwarf Mistletoe Control Unit
Stridiron Creek
Cebolla Ranger District

STRIDIRON CR. CEBOLLA GUNNISON N.F.

S&PF LODGEPOLE PINE WITH MISTLETOE- YIELD PER ACRE
SITE INDEX 60, 999-YEAR CUTTING CYCLE
THINNING INTENSITY- INITIAL- 999. SUBSEQUENT- 70.

		ENTIRE STAND BEFORE AND AFTER THINNING									PERIODIC INTERMEDIATE CUTS				
STAND AGE YEARS	DWARF MST RATE	TREES NO.	BASAL AREA SQ.FT.	AVERAGE D.B.H. IN.	AVERAGE HEIGHT FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME C.FT	MERCHANTABLE VOLUME CF/YR	SAWTIMBER VOLUME B.FT	SAWTIMBER VOLUME BF/Y	TREES NO.	BASAL AREA SQ.FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME CU.FT.	SAWTIMBER VOLUME BD.FT.
26	1.5	1610	25	1.7	20	229	0	0	0	0					
26	1.5	1610	25	1.7	20	229	0		0		0	0	0	0	0
36	2.2	1390	55	2.7	27	704	0	0	0	0					
46	2.9	1168	74	3.4	30	1071	0	0	0	0					
56	3.6	955	88	4.1	37	1568	0	0	0	0					
66	4.3	886	111	4.8	42	2275	0	0	0	0					
76	5.0	799	127	5.4	45	2837	860	11	0	0					
86	5.7	699	133	5.9	48	3141	1454	17	0	0					
96	6.0	593	128	6.3	49	3149	1860	19	0	0					
106	6.0	497	122	6.7	50	3062	2211	21	0	0					
116	6.0	416	114	7.1	51	2940	2294	20	0	0					
126	6.0	348	107	7.5	52	2795	2308	18	0	0					
								TOTAL YIELDS					229	0	0

MINIMUM CUTS FOR INCLUSION IN TOTAL YIELDS-- 500. CUBIC FEET AND 1500. BOARD FEET

DWARF MISTLETOE INFECTION STARTED AT AGE 9. AND RATING WAS 6.0 AT AGE 130.

NOTE THAT NOT ALL SCHEDULED THINNINGS WERE POSSIBLE.

MERCH. CU. FT. - TREES 6.0 INCHES D.B.H. AND LARGER TO 4.0-INCH TOP.

BD.FT. - TREES 6.5 INCHES D.B.H. AND LARGER TO A 6-INCH TOP.

@FIN

STRIDIRON CR. CEBOLLA GUNNISON N.F.

S&PF LODGEPOLE PINE WITH MISTLETOE- YIELD PER ACRE
SITE INDEX 60. 30-YEAR CUTTING CYCLE
THINNING INTENSITY- INITIAL- 70. SUBSEQUENT- 70.

		ENTIRE STAND BEFORE AND AFTER THINNING									PERIODIC INTERMEDIATE CUTS				
STAND AGE YEARS	DWARF MST RATE	TREES NO.	BASAL AREA SQ.FT.	AVERAGE D.B.H. IN.	AVERAGE HEIGHT FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME C.FT	MERCHANTABLE VOLUME CF/YR	SAWTIMBER VOLUME B.FT	SAWTIMBER VOLUME BF/Y	TREES NO.	BASAL AREA SQ.FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME CU.FT.	SAWTIMBER VOLUME BD.FT.
26	1.5	1610	25	1.7	20	229	0	0	0	0					
26	.0	584	5	1.3	18	45	0		0		1026	20	184	0	0
36	.3	562	38	3.5	25	460	0	0	0	0					
46	.7	552	67	4.7	28	929	0	0	0	0					
56	2.0	547	94	5.6	35	1632	599	11	0	0					
56	.5	252	49	6.0	36	900	445		0		295	45	732	154	0
66	1.0	249	68	7.1	42	1440	1124	17	0	0					
76	1.6	247	86	8.0	47	2018	1753	23	0	0					
86	2.3	246	104	8.8	50	2636	2400	28	9826	114					
86	1.2	151	68	9.1	51	1758	1616		6621		95	36	878	784	3205
96	1.9	147	82	10.1	54	2246	2106	30	8813	125					
106	2.6	146	95	10.9	57	2732	2573	32	11059	135					
116	3.3	141	103	11.6	60	3082	2912	32	12785	138					
116	3.3	141	103	11.6	60	3082	2912		12785		0	0	0	0	0
126	4.0	132	107	12.2	62	3258	3087	31	13784	135					
									TOTAL YIELDS			4876		3696	15990

MINIMUM CUTS FOR INCLUSION IN TOTAL YIELDS-- 500. CUBIC FEET AND 1500. BOARD FEET

DWARF MISTLETOE INFECTION STARTED AT AGE 9. AND RATING WAS 4.0 AT AGE 130.

NOTE THAT NOT ALL SCHEDULED THINNINGS WERE POSSIBLE.

MERCH. CU. FT. - TREES 6.0 INCHES D.B.H. AND LARGER TO 4.0-INCH TOP.

BD.FT. - TREES 6.5 INCHES D.B.H. AND LARGER TO A 6-INCH TOP.

STRIDIRON CR. CEBOLLA GUNNISON N.F.

S&PF LODGEPOLE PINE WITH MISTLETOE- YIELD PER ACRE
SITE INDEX 60. 30-YEAR CUTTING CYCLE
THINNING INTENSITY- INITIAL- 70. SUBSEQUENT- 80.

		ENTIRE STAND BEFORE AND AFTER THINNING									PERIODIC INTERMEDIATE CUTS				
STAND AGE YEARS	DWARF MST RATE	TREES NO.	BASAL AREA SQ.FT.	AVERAGE D.B.H. IN.	AVERAGE HEIGHT FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME C.FT	MERCHANTABLE VOLUME CF/YR	SAWTIMBER VOLUME B.FT	SAWTIMBER VOLUME BF/Y	TREES NO.	BASAL AREA SQ.FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME CU.FT.	SAWTIMBER VOLUME BD.FT.
26	1.5	1610	25	1.7	20	229	0	0	0	0					
26	.0	584	5	1.3	18	45	0		0		1026	20	184	0	0
36	.3	562	38	3.5	25	460	0	0	0	0					
46	.7	552	67	4.7	28	929	0	0	0	0					
56	2.0	547	94	5.6	35	1632	599	11	0	0					
56	.7	293	56	5.9	36	1003	464		0		254	38	629	135	0
66	1.3	290	75	6.9	42	1573	1184	18	0	0					
76	2.0	289	96	7.8	46	2230	1903	25	0	0					
86	2.7	287	116	8.6	50	2917	2634	31	10784	125					
86	1.6	179	77	8.9	51	1980	1809		7392		108	39	937	825	3392
96	2.3	176	92	9.8	54	2514	2332	33	9814	138					
106	3.0	172	105	10.6	57	3022	2842	35	12096	146					
116	3.7	164	114	11.3	59	3395	3204	35	13940	149					
116	3.7	164	114	11.3	59	3395	3204		13940		0	0	0	0	0
126	4.4	152	117	11.9	61	3556	3365	33	14900	145					
								TOTAL YIELDS			5145		4029		17332

MINIMUM CUTS FOR INCLUSION IN TOTAL YIELDS-- 500. CUBIC FEET AND 1500. BOARD FEET.

DWARF MISTLETOE INFECTION STARTED AT AGE 9. AND RATING WAS 4.4 AT AGE 130.

NOTE THAT NOT ALL SCHEDULED THINNINGS WERE POSSIBLE.

MERCH. CU. FT. - TREES 6.0 INCHES D.B.H. AND LARGER TO 4.0-INCH TOP.

BD.FT. - TREES 6.5 INCHES D.B.H. AND LARGER TO A 6-INCH TOP.

STRIDIRON CR. CEBOLLA GUNNISON N.F.

S&PF LODGEPOLE PINE WITH MISTLETOE- YIELD PER ACRE
SITE INDEX 60. 30-YEAR CUTTING CYCLE
THINNING INTENSITY- INITIAL- 70. SUBSEQUENT- 90.

		ENTIRE STAND BEFORE AND AFTER THINNING									PERIODIC INTERMEDIATE CUTS				
STAND AGE YEARS	DWARF MST RATE	TREES NO.	BASAL AREA SQ.FT.	AVERAGE D.B.H. IN.	AVERAGE HEIGHT FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME C.FT	MERCHANTABLE VOLUME CF/YR	SAWTIMBER VOLUME B.FT	SAWTIMBER VOLUME BF/Y	TREES NO.	BASAL AREA SQ.FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME CU.FT.	SAWTIMBER VOLUME BD.FT.
26	1.5	1610	25	1.7	20	229	0	0	0	0					
26	.0	584	5	1.3	18	45	0		0		1026	20	184	0	0
36	.3	562	38	3.5	25	460	0	0	0	0					
46	.7	552	67	4.7	28	929	0	0	0	0					
56	2.0	547	94	5.6	35	1632	599	11	0	0					
56	.9	330	63	5.9	36	1123	520		0		217	31	509	79	0
66	1.5	328	85	6.9	41	1770	1332	20	0	0					
76	2.2	327	106	7.7	46	2445	2066	27	0	0					
86	2.9	321	124	8.4	50	3095	2765	32	11341	132					
86	1.9	208	86	8.7	51	2183	1980		8082		113	38	912	785	3259
96	2.6	206	101	9.5	54	2746	2543	35	10581	144					
106	3.3	199	113	10.2	56	3214	3015	36	12661	150					
116	4.0	187	119	10.8	59	3520	3313	35	14195	150					
116	4.0	187	119	10.8	59	3520	3313		14195		0	0	0	0	0
126	4.7	171	121	11.4	60	3668	3463	34	15116	146					
								TOTAL YIELDS				5125		4098	17454

MINIMUM CUTS FOR INCLUSION IN TOTAL YIELDS-- 500. CUBIC FEET AND 1500. BOARD FEET

DWARF MISTLETOE INFECTION STARTED AT AGE 9. AND RATING WAS 4.7 AT AGE 130.

NOTE THAT NOT ALL SCHEDULED THINNINGS WERE POSSIBLE.

MERCH. CU. FT. - TREES 6.0 INCHES D.B.H. AND LARGER TO 4.0-INCH TOP.

BD.FT. - TREES 6.5 INCHES D.B.H. AND LARGER TO A 6-INCH TOP.

STRIDIRON CR. CEBOLLA GUNNISON N.F.

S&PF LODGEPOLE PINE WITH MISTLETOE- YIELD PER ACRE
SITE INDEX 60. 40-YEAR CUTTING CYCLE
THINNING INTENSITY- INITIAL- 70. SUBSEQUENT- 70.

		ENTIRE STAND BEFORE AND AFTER THINNING									PERIODIC INTERMEDIATE CUTS				
STAND AGE YEARS	DWARF MST RATE	TREES NO.	BASAL AREA SQ.FT.	AVERAGE D.B.H. IN.	AVERAGE HEIGHT FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME C.FT	MERCHANTABLE VOLUME CF/YR	SAWTIMBER VOLUME B.FT	SAWTIMBER VOLUME BF/Y	TREES NO.	BASAL AREA SQ.FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME CU.FT.	SAWTIMBER VOLUME BD.FT.
26	1.5	1610	25	1.7	20	229	0	0	0	0					
26	.0	584	5	1.3	18	45	0		0		1026	20	184	0	0
36	.3	562	38	3.5	25	460	0	0	0	0					
46	.7	552	67	4.7	28	929	0	0	0	0					
56	2.0	547	94	5.6	35	1632	599	11	0	0					
66	2.7	542	117	6.3	41	2374	1403	21	0	0					
66	1.1	225	55	6.7	42	1160	838		0		317	62	1214	565	0
76	1.8	222	72	7.7	47	1682	1421	26	0	0					
86	2.5	220	89	8.6	50	2253	2034	30	8302	97					
96	3.2	214	103	9.4	54	2786	2576	33	10685	111					
106	3.9	202	112	10.1	56	3185	2986	34	12497	118					
106	3.9	202	112	10.1	56	3185	2986		12497		0	0	0	0	0
116	4.6	186	116	10.7	58	3415	3213	33	13719	118					
126	5.3	166	114	11.2	60	3420	3226	30	13996	111					
								TOTAL YIELDS			4583		3551		12497

MINIMUM CUTS FOR INCLUSION IN TOTAL YIELDS-- 500. CUBIC FEET AND 1500. BOARD FEET

DWARF MISTLETOE INFECTION STARTED AT AGE 9. AND RATING WAS 5.3 AT AGE 130.

NOTE THAT NOT ALL SCHEDULED THINNINGS WERE POSSIBLE.

MERCH. CU. FT. - TREES 6.0 INCHES D.B.H. AND LARGER TO 4.0-INCH TOP.

BD.FT. - TREES 6.5 INCHES D.B.H. AND LARGER TO A 6-INCH TOP.

STRIDIRON CR. CEBOLLA GUNNISON N.F.

S&PF LODGEPOLE PINE WITH MISTLETOE- YIELD PER ACRE
SITE INDEX 60. 40-YEAR CUTTING CYCLE
THINNING INTENSITY- INITIAL- 70. SUBSEQUENT- 80.

		ENTIRE STAND BEFORE AND AFTER THINNING									PERIODIC INTERMEDIATE CUTS				
STAND AGE YEARS	DWARF MST RATE	TREES NO.	BASAL AREA SQ.FT.	AVERAGE D.B.H. IN.	AVERAGE HEIGHT FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME C.FT	MERCHANTABLE VOLUME CF/YR	SAWTIMBER VOLUME B.FT	SAWTIMBER VOLUME BF/Y	TREES NO.	BASAL AREA SQ.FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME CU.FT.	SAWTIMBER VOLUME BD.FT.
26	1.5	1610	25	1.7	20	229	0	0	0	0					
26	.0	584	5	1.3	18	45	0		0		1026	20	184	0	0
36	.3	562	38	3.5	25	460	0	0	0	0					
46	.7	552	67	4.7	28	929	0	0	0	0					
56	2.0	547	94	5.6	35	1632	599	11	0	0					
66	2.7	542	117	6.3	41	2374	1403	21	0	0					
66	1.2	257	63	6.7	42	1318	952		0		285	54	1056	451	0
76	1.9	255	82	7.7	46	1922	1623	21	0	0					
86	2.6	253	100	8.5	50	2518	2262	26	9243	107					
96	3.3	244	115	9.3	53	3092	2855	30	11820	123					
106	4.0	229	125	10.0	56	3518	3297	31	13911	131					
106	4.0	229	125	10.0	56	3518	3297		13911		0	0	0	0	0
116	4.7	209	128	10.6	58	3741	3517	30	14971	129					
126	5.4	185	122	11.0	59	3666	3455	27	14894	118					
								TOTAL YIELDS				4758	3297		13911

MINIMUM CUTS FOR INCLUSION IN TOTAL YIELDS-- 500. CUBIC FEET AND 1500. BOARD FEET

DWARF MISTLETOE INFECTION STARTED AT AGE 9. AND RATING WAS 5.4 AT AGE 130.

NOTE THAT NOT ALL SCHEDULED THINNINGS WERE POSSIBLE.

MERCH. CU. FT. - TREES 6.0 INCHES D.B.H. AND LARGER TO 4.0-INCH TOP.

BD.FT. - TREES 6.5 INCHES D.B.H. AND LARGER TO A 6-INCH TOP.

STRIDIRON CR. CEBOLLA GUNNISON N.F.

S&PF LODGEPOLE PINE WITH MISTLETOE- YIELD PER ACRE
SITE INDEX 60, 40-YEAR CUTTING CYCLE
THINNING INTENSITY- INITIAL- 70. SUBSEQUENT- 90.

		ENTIRE STAND BEFORE AND AFTER THINNING									PERIODIC INTERMEDIATE CUTS				
STAND AGE YEARS	DWARF MST RATE	TREES NO.	BASAL AREA SQ.FT.	AVERAGE D.B.H. IN.	AVERAGE HEIGHT FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME C.FT	MERCHANTABLE VOLUME CF/YR	SAWTIMBER VOLUME B.FT	SAWTIMBER VOLUME BF/Y	TREES NO.	BASAL AREA SQ.FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME CU.FT.	SAWTIMBER VOLUME BD.FT.
26	1.5	1610	25	1.7	20	229	0	0	0	0					
26	.0	584	5	1.3	18	45	0		0		1026	20	184	0	0
36	.3	562	38	3.5	25	460	0	0	0	0					
46	.7	552	67	4.7	28	929	0	0	0	0					
56	2.0	547	94	5.6	35	1632	599	11	0	0					
66	2.7	542	117	6.3	41	2374	1403	21	0	0					
66	1.4	294	70	6.6	42	1455	999		0		248	47	919	404	0
76	2.1	292	90	7.5	46	2077	1715	23	0	0					
86	2.8	288	108	8.3	50	2719	2414	28	9893	115					
96	3.5	276	122	9.0	53	3257	2986	31	12286	128					
106	4.2	258	130	9.6	56	3631	3365	32	14103	133					
106	4.2	258	130	9.6	56	3631	3365		14103		0	0	0	0	0
116	4.9	234	130	10.1	58	3777	3541	31	14819	128					
126	5.6	206	124	10.5	59	3686	3464	27	14697	117					
								TOTAL YIELDS				4734		3365	14103

MINIMUM CUTS FOR INCLUSION IN TOTAL YIELDS-- 500. CUBIC FEET AND 1500. BOARD FEET

DWARF MISTLETOE INFECTION STARTED AT AGE 9. AND RATING WAS 5.6 AT AGE 130.

NOTE THAT NOT ALL SCHEDULED THINNINGS WERE POSSIBLE.

MERCH. CU. FT. - TREES 6.0 INCHES D.B.H. AND LARGER TO 4.0-INCH TOP.

BD.FT. - TREES 6.5 INCHES D.B.H. AND LARGER TO A 6-INCH TOP.

STRIDIRON CR. CEBOLLA GUNNISON N.F.

S&PF LODGEPOLE PINE WITH MISTLETOE- YIELD PER ACRE
SITE INDEX 60, 50-YEAR CUTTING CYCLE
THINNING INTENSITY- INITIAL- 70. SUBSEQUENT- 70.

		ENTIRE STAND BEFORE AND AFTER THINNING									PERIODIC INTERMEDIATE CUTS				
STAND AGE YEARS	DWARF MST RATE	TREES NO.	BASAL AREA SQ.FT.	AVERAGE D.B.H. IN.	AVERAGE HEIGHT FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME C.FT	MERCHANTABLE VOLUME CF/YR	SAWTIMBER VOLUME B.FT	SAWTIMBER VOLUME BF/Y	TREES NO.	BASAL AREA SQ.FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME CU.FT.	SAWTIMBER VOLUME BD.FT.
26	1.5	1610	25	1.7	20	229	0	0	0	0					
26	.0	584	5	1.3	18	45	0		0		1026	20	184	0	0
36	.3	562	38	3.5	25	460	0	0	0	0					
46	.7	552	67	4.7	28	929	0	0	0	0					
56	2.0	547	94	5.6	35	1632	599	11	0	0					
66	2.7	542	117	6.3	41	2374	1403	21	0	0					
76	3.4	522	136	6.9	45	3048	2295	30	0	0					
76	3.4	522	136	6.9	45	3048	2295		0		0	0	0	0	0
86	4.1	489	150	7.5	49	3643	3008	35	0	0					
96	4.8	445	155	8.0	51	3988	3464	36	0	0					
106	5.5	393	151	8.4	53	4039	3608	34	14851	140					
116	6.0	337	139	8.7	55	3814	3459	30	14209	122					
126	6.0	282	125	9.0	55	3474	3184	25	13106	104					
126	6.0	282	125	9.0	55	3474	3184		13106		0	0	0	0	0
								TOTAL YIELDS				3658		3184	13106

MINIMUM CUTS FOR INCLUSION IN TOTAL YIELDS-- 500. CUBIC FEET AND 1500. BOARD FEET

DWARF MISTLETOE INFECTION STARTED AT AGE 9. AND RATING WAS 6.0 AT AGE 130.

NOTE THAT NOT ALL SCHEDULED THINNINGS WERE POSSIBLE.

MERCH. CU. FT. - TREES 6.0 INCHES D.B.H. AND LARGER TO 4.0-INCH TOP.

BD.FT. - TREES 6.5 INCHES D.B.H. AND LARGER TO A 6-INCH TOP.

STRIDIRON CR. CEBOLLA GUNNISON N.F.

S&PF LODGEPOLE PINE WITH MISTLETOE- YIELD PER ACRE
SITE INDEX 60, 50-YEAR CUTTING CYCLE
THINNING INTENSITY- INITIAL- 70. SUBSEQUENT- 80.

		ENTIRE STAND BEFORE AND AFTER THINNING									PERIODIC INTERMEDIATE CUTS				
STAND AGE YEARS	DWARF MST RATE	TREES NO.	BASAL AREA SQ.FT.	AVERAGE D.B.H. IN.	AVERAGE HEIGHT FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME C.FT	MERCHANTABLE VOLUME CF/YR	SAWTIMBER VOLUME B.FT	SAWTIMBER VOLUME BF/Y	TREES NO.	BASAL AREA SQ.FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME CU.FT.	SAWTIMBER VOLUME BD.FT.
26	1.5	1610	25	1.7	20	229	0	0	0	0					
26	.0	584	5	1.3	18	45	0		0		1026	20	184	0	0
36	.3	562	38	3.5	25	460	0	0	0	0					
46	.7	552	67	4.7	28	929	0	0	0	0					
56	2.0	547	94	5.6	35	1632	599	11	0	0					
66	2.7	542	117	6.3	41	2374	1403	21	0	0					
76	3.4	522	136	6.9	45	3048	2295	30	0	0					
76	3.4	522	136	6.9	45	3048	2295		0		0	0	0	0	0
86	4.1	489	150	7.5	49	3643	3008	35	0	0					
96	4.8	445	155	8.0	51	3988	3464	36	0	0					
106	5.5	393	151	8.4	53	4039	3608	34	14851	140					
116	6.0	337	139	8.7	55	3814	3459	30	14209	122					
126	6.0	282	125	9.0	55	3474	3184	25	13106	104					
126	6.0	282	125	9.0	55	3474	3184		13106		0	0	0	0	0
								TOTAL YIELDS			3658		3184		13106

MINIMUM CUTS FOR INCLUSION IN TOTAL YIELDS-- 500. CUBIC FEET AND 1500. BOARD FEET

DWARF MISTLETOE INFECTION STARTED AT AGE 9. AND RATING WAS 6.0 AT AGE 130.

NOTE THAT NOT ALL SCHEDULED THINNINGS WERE POSSIBLE.

MERCH. CU. FT. - TREES 6.0 INCHES D.B.H. AND LARGER TO 4.0-INCH TOP.

BD.FT. - TREES 6.5 INCHES D.B.H. AND LARGER TO A 6-INCH TOP.

STRIDIRON CR. CEBOLLA GUNNISON N.F.

S&PF LODGEPOLE PINE WITH MISTLETOE- YIELD PER ACRE
SITE INDEX 60, 50-YEAR CUTTING CYCLE
THINNING INTENSITY- INITIAL- 70. SUBSEQUENT- 90.

		ENTIRE STAND BEFORE AND AFTER THINNING									PERIODIC INTERMEDIATE CUTS				
STAND AGE YEARS	DWARF MST RATE	TREES NO.	BASAL AREA SQ.FT.	AVERAGE D.B.H. IN.	AVERAGE HEIGHT FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME C.FT	MERCHANTABLE VOLUME CF/YR	SAWTIMBER VOLUME B.FT	SAWTIMBER VOLUME BF/Y	TREES NO.	BASAL AREA SQ.FT.	TOTAL VOLUME CU.FT.	MERCHANTABLE VOLUME CU.FT.	SAWTIMBER VOLUME BD.FT.
26	1.5	1610	25	1.7	20	229	0	0	0	0					
26	.0	584	5	1.3	18	45	0		0		1026	20	184	0	0
36	.3	562	38	3.5	25	460	0	0	0	0					
46	.7	552	67	4.7	28	929	0	0	0	0					
56	2.0	547	94	5.6	35	1632	599	11	0	0					
66	2.7	542	117	6.3	41	2374	1403	21	0	0					
76	3.4	522	136	6.9	45	3048	2295	30	0	0					
76	3.4	522	136	6.9	45	3048	2295		0		0	0	0	0	0
86	4.1	489	150	7.5	49	3643	3008	35	0	0					
96	4.8	445	155	8.0	51	3988	3464	36	0	0					
106	5.5	393	151	8.4	53	4039	3608	34	14851	140					
116	6.0	337	139	8.7	55	3814	3459	30	14209	122					
126	6.0	282	125	9.0	55	3474	3184	25	13106	104					
126	6.0	282	125	9.0	55	3474	3184		13106		0	0	0	0	0
								TOTAL YIELDS			3658		3184		13106

MINIMUM CUTS FOR INCLUSION IN TOTAL YIELDS-- 500. CUBIC FEET AND 1500. BOARD FEET

DWARF MISTLETOE INFECTION STARTED AT AGE 9. AND RATING WAS 6.0 AT AGE 130.

NOTE THAT NOT ALL SCHEDULED THINNINGS WERE POSSIBLE.

MERCH. CU. FT. - TREES 6.0 INCHES D.B.H. AND LARGER TO 4.0-INCH TOP.

BD.FT. - TREES 6.5 INCHES D.B.H. AND LARGER TO A 6-INCH TOP.